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ABSTRACT

The instrumental and expressive utilities of participating in education differ among participants. To ascertain how age affects their perception of these forms of utility, questionnaires were executed by 400 middle class participants ages 18-84 in 45 classes for adults in the Chicago area. Independent variables influencing perception of utility were needs, goals, time orientation, enjoyment, sex, socioeconomic status. Findings from multiple regression analysis indicated that: (1) needs, goals, and time orientation were partial determinants of perceived instrumental utility; (2) age more than the other factors affected perceived expressive utility; (3) status and "femaleness" related more to perceived expressive than perceived instrumental utility; and (4) age was the main discriminant. Participation in education was demonstrated to be complex behavior not explained simply by "motivation." The findings suggest that older people are likely to see mainly expressive utility even in programs classified as instrumental. (Author/VG)

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EFFECT OF AGE ON PERCEPTION OF THE UTILITY OF PARTICIPATION IN EDUCATION*

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The problem

The proportion of older people in the population has grown dramatically in the last few decades. The problems that older people encounter in modern society are grave and difficult to resolve. Few of them turn to adult education as offered by and through institutions of formal learning, such as high schools and community colleges, for additional knowledge and skills that might help them to cope better with the circumstances which they face. Yet many educational administrators appear to think that the best programs that their institutions can offer for "senior citizens" are ones suited to leisure time, such as hobbies and recreation.

Results of pertinent surveys published during the period 1969-1974 (Okes; Harris) indicated that only about two per cent of people over sixty-five years of age become involved in formal educational activities. Can the limited extent of their involvement be attributed in part to their perception that the kind of educational fare referred to does not appeal to their needs, that it is not "useful" enough?

Relevant concepts

The idea that adult education possesses the power to meet human needs is rooted in various strands of sociological, psychological, and educational theory (Parsons; Cartwright; Havighurst; Londoner). Whether or not it possesses such value holds little meaning for the aging if they do not perceive that it does. Furthermore, perceiving that adult education is worthwhile in terms of meeting some people's needs is still not conducive to participating in it oneself unless one perceives that through participating in it one's own needs will be served. In short, the question asked above boils down to whether age affects what utility people see in their own participation in the adult educational opportunities of which they take advantage.

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The utility of participating assumes two forms: (1) instrumental —referring to deferred satisfaction (capacity to satisfy needs later on as a result of participating now)—and (2) expressive—referring to the experience of satisfaction of certain needs right now in the act of participating. These are not mutually exclusive categories, but they appear to be causally independent ones. Perception of instrumental utility seems to be related, logically, to the strength of (1) needs which are "practical" in the sense of pertaining ultimately to one's survival and (2) goals which are "practical" in the sense of pertaining to their achievability through actions subject to one's own control, in addition to (3) awareness of having enough future time at one's disposal to accomplish one's purpose through participation in education. Perception of expressive utility seems to be related to (1) expectation of enjoying some aspect of the experience of participation, (2) in the absence of any overriding sense that passage of time in the present involves a threat which militates against enjoying the experience.

It seemed probable that the state of one's affluence would affect the relations hypothesized in the preceding paragraph. Relative affluence can be assessed with the use of "status" indicators like income, occupational prestige, and the amount and level of education achieved. Sex might also affect them if in the past males have been socialized more to regard educational participation as having instrumental worth, while females have been socialized more toward perceiving expressive value in it. The effects of age, however, could be diffuse, since age would tend to modify both future time perspective and present time pressures, favor a demographic preponderance of females over males, and influence economic status (upward, not downward, in a middle class sample). Accordingly, it was hypothesized that status and "femaleness" would predispose toward the perception of expressive utility, but that age would have no independent effects.

Methods employed to study the problem

Since available time and resources were limited, the research was conducted in a single metropolitan area (Chicago), except for a group of older people in Sarasota, Florida. The sample included only persons currently participating in education, and the study was nonexperimental, cross-sectional, and retrospective in design. A questionnaire was specially

developed and validated as an instrument for gathering data to be used to measure two dependent variables, Perceived Instrumental Utility (PIU) and Perceived Expressive Utility (PEU), and the designated independent variables, Practical Needs (PN), Practical Goals (PG), Time Orientation (TO)—present (PTP) and future (FTP), Enjoyment (ENJ), Age, Sex, Income (INC), Occupation (OCC), and Educational Level (EDL) and Amount (EDA).

Eleven institutional sponsors of adult educational activities cooperated in the study. The Chicago-area institutions were widely scattered and displayed diverse characteristics (public/private, urban/suburban/rural, credit/noncredit). Students in 61 classes in 46 different programs were involved, their ages ranging from 18 to 86. The programs were classified by separate panels of educators and educational consumers as designed to be either instrumental (21 programs) or expressive (23 programs—the remaining two programs were unclassifiable).

602 completed questionnaires (completion rate: 51%) were divided into (a) a main sample of 400, all obtained in the Chicago area, with no institution dominating the sample, and (b) several "comparative groups": the Florida sample of 73, 177 students in programs for adults offered by The University of Chicago, and 19 individuals who completed questionnaires and were also interviewed subsequently in order to obtain test-retest reliability data.

The research data were analyzed and compared in various ways, the principal method employed being step-down multiple regression analysis. The exhibits accompanying the present paper consist of tables contained in the original report of this research (Marcus) which set forth the essential data regarding the reliability of the instrument and the most important findings.

Findings

1. PIU and PEU were determined to be conceptually similar but phenomenally distinct variables. However, the findings for PEU were consistently more ambiguous than those for PIU.

2. 74% of the intercorrelations for the main sample were statistically significant, although virtually all the coefficients were only between .06 and .20. The values obtained indicated that (a) as the age of the respondents—a clearly middle class sample—increased, their status increased, and (b) as their status increased, their practical needs

decreased, while the level of their goals increased. Only goals, not needs, was correlated with future time perspective. Age was correlated positively with PEU (r=.172, P=.001), negatively with PIU (r=-.288, P=.001).

3. The hypothesis that PIU is related with practical needs or goals and with strong time orientation was supported--however, the significant effects of time orientation were mediated through other variables, not directly.

4. The hypothesis that PEU is related with enjoyment in the absence of strong time orientation was not supported. Age was the main determinant of PEU, practical needs second, and sex third.

5. As hypothesized, status and "femaleness" were correlated more positively with PEU than with PIU, but the evidence on this point relies on the directions of the signs involved and the consistency of the pattern for ten different findings.

6. In this study, age was found to be a significant determinant of PEU independently of its interactions with status and sex.

7. Within each component of the main sample and within each comparative group, the postulated relations were consistent when the special characteristics of each "small sample" were considered.

8. Evidence appeared that both the number and intensity of "areas of life interest" may decline with age.

Discussion

Adult education participants appear to discriminate between the instrumental and expressive utilities of their participation in adult educational activities. The effect of age on their perception of these utilities is to tend to shift them from the instrumental category to the expressive type. The importance of this observation lies in the fact that it is the participant who makes the decision whether or not to participate in adult education. The findings extend the results of previous research by Boshier, Cunningham, Havighurst, Londoner, and others and recent judgment by Houle to the effect that participating in education is a much more complex kind of behavior than it was conceived of as being when researchers endeavored to measure it by means of "interests" and "predispositions to participate" or "educational orientations." They are also harmonious with Maslow's distinction between deficiency- and growth-motivation.

Older persons are apt to perceive programs designed to be instrumentally useful to them as offering chance for participation for the sake of realizing expressive utility. Programs intended to be chiefly expressive in nature probably tend to attract only a small portion of older aged prospective students. Therefore, provision of instrumental education for the aging can be justified on the bases of both the nature of their "practical" needs and their age-related perceptual tendency with regard to the nature of the utility of their participation in it. Moreover, public emphasis on the instrumental value of participating in continuing education should also help to counter the attitudinal residuals of earlier socialization concerning the worthlessness of educational participation in old age. Since the findings were fully consistent with the mass of previous evidence that adult education appeals mainly to the middle class, offering more instrumental programs for the elderly may also succeed in involving more nonaffluent older individuals in it. Finally, because the findings also suggest that older persons may tend to focus their interests more effectively than younger persons do, they point to possibilities for reinstating an interest in learning during later life and for centering learning around the focussed interests of the elderly.

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TABLE 1

SUMMARY OF INSTRUMENT RELIABILITIES

Variable	Pilot Test (N=21)	Main Sample (N=400)	Comparative Groups (N=221)	Interviews (N=19)
Income				.541[d]
Occupation				.712[d]
Educational Level				.974[d]
Educational Amount				.836[d]
Time Orientation	.63[a]	.73[a]	.73[a]	.864[d]
Present Pressures	.69[a]	.70[a]	.57[a]	.858[d]
Future Perspective	.10[a]	.69[a]	.84[a]	.822[d]
Practical Needs and Goals	....	.71[a]	....	.....
Practical Needs	.70[a]	.80[a]	....	.829[d]
Practical Goals (7 items)	....	.41[a]	.34[a]	.841[d]
Enjoyment	.81[a]	.64[a]	.61[a]	.808[d]
PIU	....	.817[b] .899[c]	....	.964[d]
PEU	....	.723[b] .839[c]	....	.842[d]

[a]Kuder-Richardson (Horst modification) correlation.

[b]Split-half correlation.

[c]Split-half correlation corrected for scale brevity.

[d]Test-retect correlation.

EXHIBITS 7

TABLE 2

COMPARISON OF PARTICIPANTS' PIU AND PEU SCORES IN CLASSES JUDGED TO BE "INSTRUMENTAL" AND "EXPRESSIVE" IN PURPOSE

1. For Top Three Classes in Each Category (N=79)

	N of participants in Instrumental classes = 22		N of participants in Expressive classes = 57	
	PIU	PEU	PIU	PEU
Total Score	451	228	533	1054
Mean	20.50	10.36	9.35	18.49
Variance	73.69	32.24	57.66	48.65
Standard Deviation	8.58	5.68	7.59	6.98
T-Test Values (df=2,77)			5.64	4.87
			P < .001	P < .001

2. For Top Nine Classes in Each Category (N=206)

	N Instrumental = 83		N Expressive = 123	
	PIU	PEU	PIJ	PEU
Total Score	1896	1376	1486	2196
Mean	22.84	16.58	12.08	17.85
Variance	84.04	89.30	84.67	49.65
Standard Deviation	9.17	9.45	9.20	7.05
T-Test Values (df-2,204)			8.25	1.11
			P < .001	P < .15 (N.S.)

3. For Top Fifteen Classes in Each Category (N=297)

	N Instrumental = 132		N Expressive = 165	
	PIU	PEU	PIU	PEU
Total Score	2948	2045	1870	2995
Mean	22.33	15.49	11.33	18.15
Variance	81.66	80.60	79.08	46.92
Standard Deviation	9.04	8.98	8.89	6.85
T-Test Values (df=2,295)			10.51	2.90
			P < .001	P < .005

TABLE 3

DISCRIMINANT ANALYSIS, PIU (N=197) AND PEU (N=188) WITH ALL BACKGROUND VARIABLES

	Unstandardized Coefficient	Standardized Coefficient	Canonical Correlation	Chi^2	df	Significance
Sex	-0.343	-0.168				
Occupation	0.006	0.053				
Educational level	-0.044	-0.128				
Educational amount	0.101	0.490				
Age	0.037	0.576				
Constant	-2.113		0.398	65.505	5	0.000
	Step down F	P less than				
Age	47.271	0.0001				
Sex	2.832	0.093				
Occupation	4.388	0.037				
Income	0.200	0.655				
Educational level	6.684	0.010				
Educational amount	7.527	0.006				

TABLE 4

ANALYSIS OF MAIN SAMPLE DATA ON THE BACKGROUND VARIABLES

Age (N,%)	Sex (N,%)		Income Level[c]			Education M/EdL[e]	M/EdA[f]	M/Occupation Level[g]
18[a]-29 N=91 (.23)	N Male	28 (.07)	1	33	(.08)	13.98	10.85	67.30
			2	23	(.06)			
			3	33	(.03)			
	N Female	63 (.16)	4	0				
30-39 N=110 (.27)	N Male	56 (.14)	1	21	(.05)	14.29	11.51	69.49
			2	9	(.02)			
			3	65	(.16)			
	N Female	54 (.13)	4	9	(.02)			
40-49 N=59 (.15)	N Male	20 (.05)	1	8	(.02)	14.07	11.29	71.49
			2	6	(.01)			
			3	34	(.08)			
	N Female	39 (.10)	4	9	(.02)			
50-59 N=71 (.18)	N Male	23 (.06)	1	3	(.01)	14.63	12.21	73.11
			2	10	(.02)			
			3	42	(.10)			
	N Female	48 (.12)	4	11	(.03)			
60-69 N=46 (.11)	N Male	10 (.02)	1	2	(.00)	14.57	12.72	72.76
			2	10	(.02)			
			3	26	(.06)			
	N Female	36 (.09)	4	6	(.01)			
70 and over N=23 (.06)	N Male	6 (.01)	1	6	(.01)	13.35	10.35	69.48
			2	5	(.01)			
			3	11	(.03)			
	N Female	15 (.04)	4	0				
Total N=400	N Male	143[b] (.36)	1	73[d]	(.19)	14.22	11.52	70.30
			2	63[d]	(.16)			
			3	211[d]	(.55)			
	N Female	255[b] (.64)	4	35[d]	(.09)			

TABLE 5

ANALYSIS OF DATA FOR BACKGROUND VARIABLES BY MAIN SAMPLE COMPONENTS AND COMPARATIVE GROUPS

	N Cases	N Male*	N Female*	M Age	Income* Level 1	Level 2	Level 3	Level 4	N Occupation*	M Occupation*	Min Occupation*	M Educational Level	M Educational Amount
Program													
Kankakee	45	16	29	47.44	(.31) 14	(.13) 6	(.44) 20	(.02) 1	35	36.74	62	12.02	7.02
Roosevelt	31	11	19	36.29	(.19) 6	(.26) 8	(.52) 16	(.03) 1	29	69.82	70	13.93	10.12
DePaul	29	13	16	38.44	(.00) 0	(.07) 2	(.90) 26	(.00) 0	29	74.65	74	14.13	10.75
Loop	36	6	30	59.25	(.06) 2	(.25) 9	(.56) 20	(.11) 4	35	75.	74	15.22	13.00
Joliet	15	0	15	32.86	(.60) 9	(.13) 2	(.20) 3	(.00) 0	9	63.33	59	11.20	6.00
Monacep	53	19	34	44.50	(.04) 2	(.13) 7	(.60) 32	(.11) 6	49	74.18	74	13.52	10.01
Art Institute	51	20	30	28.29	(.57) 29	(.14) 7	(.27) 14	(.02) 1	44	70.97	71	15.56	13.01
YMCA	21	9	12	47.38	(.05) 1	(.33) 7	(.62) 13	(.00) 0	20	73.70	74	14.76	12.00
Thornton	40	31	9	37.67	(.05) 2	(.15) 6	(.78) 31	(.03) 1	36	65.63	65	12.47	7.82
UC-Returning Scholars	31	9	22	46.90	(.13) 4	(.13) 4	(.35) 11	(.32) 10	27	76.88	78	17.45	16.25
UC-Adult Education	48	9	39	51.79	(.08) 4	(.10) 5	(.52) 25	(.23) 11	41	75.80	74	15.20	12.97
Main Sample	400	143	255	43.19	(.18) 73	(.16) 63	(.53) 211	(.09) 35	354	72.03	74	14.22	10.96
Comparative Groups													
Florida	73	31	41	69.62	(.03) 2	(.19) 14	(.53) 39	(.22) 16	54	78.00	77	15.37	13.32

UC-Adult Education Total**	177	39	138	48.49	(.10) 17	(.12) 22	(.47) 83	(.29) 51	150	75.67	74	15.53	13.57
(Interviews)	(19)	(10)	(9)	(43.68)	(.00) (0)	(.16) (3)	(.68) (13)	(.11) (2)	(19)	(73.05)	(74)	(15.79)	(13.21)
Grand Total	602	204	395	.....	88	94	308	91	517	.....	..	.....	.....

*Figures do not equal 100% of the cases.

**Figures include the 48 cases included in the main sample.

TABLE 6

ANALYSIS OF DATA FOR CONSTRUCT VARIABLES BY MAIN SAMPLE COMPONENTS AND COMPARATIVE GROUPS

	N PIU	M PIU	Mdn PIU	N PEU	M PEU	Mdn PEU	M Practical Needs	M Practical Goals	M Time Orientation	M Present Pressures	M Future Perspective	M Enjoyment
Program												
Kankakee	29	20.04	20	13	16.68	16	9.22	3.35	21.20	13.06	8.64	8.86
Roosevelt	28	24.58	26	2	13.70	12	10.74	4.45	24.19	14.51	9.96	7.58
DePaul	28	22.48	24	1	11.79	11	8.24	4.55	24.24	14.27	10.51	8.72
Loop	1	7.05	6	34	17.58	18	7.08	3.05	19.66	12.00	7.77	7.08
Joliet	11	31.86	31	3	25.53	29	12.80	3.33	19.53	12.66	8.00	8.20
MONACEP	25	15.47	15	26	15.52	14	7.58	3.64	23.09	13.96	9.30	8.24
Art Institute	21	15.72	12	29	15.94	15	9.23	3.31	21.13	12.98	8.47	8.72
YMCA	4	13.42	11	17	22.76	24	7.52	3.71	21.38	12.66	9.23	7.95
Thornton	27	17.57	17	11	13.70	12	7.77	3.82	22.55	13.27	9.45	8.50
UC-Returning Scholars	16	16.16	16	13	15.19	14	7.64	3.64	21.87	13.12	8.87	9.83
UC-Adult Education	7	10.50	8	39	20.72	21	6.87	3.10	21.29	13.00	6.45	9.41
Main Sample	197	16.39	16	188	16.65	16	8.35	3.59	21.90	13.26	8.95	8.73
Comparative Groups												
Florida	2	7.85	6	68	17.58	17	4.19	3.42	19.81	12.42	8.00	6.14
UC-Adult Education Total	16	9.31	7	155	19.68	20	7.68	3.24	21.82	13.22	8.84	9.47
Interviews	9	14.84	11	10	14.84	15	7.37	3.89	24.16	14.68	9.69	8.89

TABLE 7

CHARACTERISTICS OF THE DATA DISTRIBUTIONS OF THE STUDY VARIABLES
(N=400)

	Min. Score	Max. Score	Mean Score	S.E.	S.D.	V	Ku	σ_{Ku}	S.E.$_{Ku}$	Sk	σ_{Sk}	S.E.$_{Sk}$
Background Variables												
Age	18	84	43.19	0.78	15.54	241.34	-0.75	0.014	72.59(P<.01)	0.45	1.087	0.42 (N.S.)
Sex	1	2	1.35	0.02	0.49	0.24	-1.43	.....	.....	0.49	.....	.....
Occupation	41	89[b]	70.31	0.44	8.82	77.85	-0.06	.....	.....	-0.65	.....	.....
Income	1[a]	4	2.43	0.05	1.03	1.06	-0.37	.....	.....	-0.70	.....	.....
Educational Level	..[a]	26[c]	14.23	0.15	3.01	9.03	3.46	.....	.....	-0.48	.....	.....
Educational Amount	..[a]	23[c]	11.52	0.24	4.89	23.93	-0.77	.....	.....	0.17	.....	.....
Construct Variables												
Practical Needs	..[a]	18	8.36	0.20	3.90	15.19	-0.77	0.014	74.32(P<.01)	0.05	0.260	0.20 (N.S.)
Practical Goals	..[a]	7	3.59	0.07	1.47	2.15	-0.40	0.014	47.48(P<.01)	-0.18	0.098	-1.78(P<.05)
Time Orientation	..[a]	34	21.90	0.24	4.86	23.56	2.18	0.014	138.20(P<.01)	-0.81	0.310	-2.63(P<.005)
Present Pressure	..[a]	21	13.26	0.16	3.14	9.88	1.43	0.014	83.81(P<.01)	-0.55	0.225	-2.42(P<.01)
Future Perspective	..[a]	14	8.95	0.12	2.46	6.06	0.64	0.014	27.19(P<.01)	-0.64	0.173	-3.70(P<.01)
Enjoyment	..[a]	18	8.73	0.16	3.17	10.05	0.76	0.014	35.90(P<.01)	-0.48	0.175	-2.75(P<.005)
(Dependent Variables)												
PEU	..[a]	36	16.66	0.39	7.78	60.55	-0.55	0.014	58.63(P<.01)	0.29	0.289	(N.S.)
PIU	..[a]	43	16.40	0.50	10.09	101.72	-0.71	0.014	70.29(P<.01)	0.36	0.361	(N.S.)

[a]Information about this variable not supplied by one or more respondents.

TABLE 8

MATRIX OF INTERCORRELATIONS OF THE STUDY VARIABLES
(N=400)

	Age[1]	Sex[1]	Inc[2]	Occ[2]	EdL[1]	EdA[2]	PN[1]	PG[1]	TO[1]	FP[1]	Enj[1]	PIU[1]	PEU[1]
Age[1]	1.000												
Sex[1]	-.121 (.008)*	1.000											
Income[2]	.185 (.001)*	.146 (.002)*	1.000										
Occupation[2]	.159 (.001)*	-.006 (.454)	.242 (.001)*	1.000									
Educational Level[1]	.033 (.255)	.067 (.040)	.187 (.001)*	.354 (.001)*	1.000								
Educational Amount[2]	.068 (.026)†	.044 (.188)	.221 (.001)*	.366 (.001)*	.858 (.001)*	1.000							
Practical Needs[1]	-.357 (.001)*	-.007 (.444)	-.201 (.001)*	-.149 (.001)*	-.103 (.020)†	-.117 (.001)*	1.000						
Practical Goals[1]	-.035 (.245)	.234 (.001)*	.063 (.062)	.076 (.022)†	.103 (.019)†	.054 (.074)	-.053 (.146)	1.000					
Time Orientation[1]	-.218 (.001)*	.115 (.011)†	.094 (.008)*	.098 (.003)*	.173 (.001)*	.072 (.021)†	.141 (.002)*	.561 (.001)*	1.000				
Present Pressures[1]	-.207 (.001)*	.063 (.106)	.052 (.094)	.072 (.023)†	.153 (.001)*	.060 (.048)†	.258 (.001)*	.325 (.001)*	.873 (.001)*	1.000			
Future Perspectives[1]	-.150 (.001)*	.160 (.001)*	.107 (.004)*	.090 (.007)*	.122 (.007)*	.041 (.128)	.000 (.497)	.658 (.001)*	.844 (.001)*	.541 (.001)*	1.000		
Enjoyment[1]	.089 (.036)†	.030 (.273)	.098 (.007)*	.115 (.001)*	.157 (.001)*	.061 (.013)†	.002 (.482)	.159 (.001)*	.219 (.001)*	.222 (.001)*	.176 (.001)*	1.000	
PIU[1]	-.288 (.001)*	.053 (.145)	.137 (.001)*	-.164 (.001)*	-.233 (.001)*	-.186 (.001)*	.318 (.001)*	.244 (.001)*	.191 (.001)*	.196 (.001)*	.209 (.001)*	-.100 (.023)†	1.000
PEU[1]	.172 (.001)*	-.145 (.002)*	-.022 (.286)	-.007 (.425)	-.096 (.027)†	-.021 (.274)	.080 (.054)	-.080 (.054)	-.114 (.011)†	-.077 (.062)	-.071 (.078)	.028 (.287)	.222 (.001)*

[1]Pearson coefficients
[2]Kendall coefficients

*P < .001
†P < .05

TABLE 9

MULTIPLE REGRESSION ANALYSIS OF HYPOTHESES 1 AND 2 BY SAMPLE COMPONENTS AND COMPARATIVE GROUPS

Sample Component	N	Hypothesis 1 (PIU) Time Orientation	Practical Goals	Practical Needs	r^2	Hypothesis 2 (PEU) Time Orientation	Enjoyment	r^2
Kankakee	45	.065	.105	.206	.04	.065	.139	.02
Roosevelt	31	.312	.474	.647	.42	.115	.310	.10
DePaul	29	.043	.246	.254	.07	.236	.237	.06
Loop	36	.159	.164	.619	.38	.213	.299	.09
Joliet	15	.062	.100	.228	.05	.286	.509	.26
MONACEP	53	.032	.220	.314	.10	.051	.067	.01
Art Institute	51	.229	.282	.462	.21	.209	.343	.12
YMCA	21	.154	.174	.363	.13	.406	.509	.26
Thornton	40	.244	.315	.430	.19	.053	.109	.01
University of Chicago--Scholars	31	.363	.367	.372	.14	.173	.239	.06
University of Chicago--Adult Education	8	(See comparative group of 177 persons, below.)						
Main Sample	400	.191	.350	.411	.17	.114	.126	.02
Comparative Group								
Florida	71	.262	.307	.402	.16	.107	.131	.02
University of Chicago--Adult Education Total	177	.221	.264	.397	.16	.007	.083	.01

TABLE 10

STEP-DOWN ANALYSIS OF PIU, USING ALL INDEPENDENT VARIABLES

Step	Variable	Multiple r	r^2	Partial Coefficient
1	Practical Needs	0.32	.10	0.32
2	Practical Goals	0.41	.17	0.24
3	Educational Amount	0.47	.22	-0.27
4	Age	0.50	.25	-0.29
5	Enjoyment	0.51	.26	-0.10
6	Occupation	0.51	.26	-0.21
7	Educational Level	0.52	.27	-0.23
8	Income	0.52	.27	-0.18
9	Time Orientation	0.52	.27	0.19
10	Sex	0.52	.27	0.05

TABLE 11

STEP-DOWN ANALYSIS OF PEU, USING ALL INDEPENDENT VARIABLES

Step	Variable	Multiple r	r^2	Partial Coefficient
1	Age	0.17	.03	0.17
2	Practical Needs	0.23	.05	0.08
3	Sex	0.26	.07	-0.15
4	Educational Level	0.27	.07	-0.10
5	Educational Amount	0.29	.08	-0.04
6	Time Orientation	0.29	.08	-0.11
7	Enjoyment	0.29	.09	0.03
8	Occupation	0.30	.09	-0.03
9	Income	0.30	.09	-0.05

TABLE 12

CORRELATIONS OF PIU AND PEU WITH VARIABLES NAMED IN HYPOTHESIS 3

	Income[a]	Occupation[a]	Educational Level[b]	Educational Amount[a]	Sex[b]
PEU	-0.02(N.S.)	-0.01(N.S.)	-0.10	-0.02(N.S.)	-0.15
PIU	-0.14	-0.16	-0.23	-0.19	0.05(N.S.)

[a]Kendall coefficients. [b]Pearson coefficients.

N.S. indicates that the correlations shown were not statistically significant ones.